

CLAIM

1. A polypeptide comprising an amino acid sequence from Ala at position 14 to Gly at position 226 of SEQ ID NO: 2 and having the biological activity of gankyrin.

2. A polypeptide comprising an amino acid sequence modified by the deletion and/or addition of one or a plurality of amino acids and/or the substitution with other amino acids in the amino acid sequence from Ala at position 14 to Gly at position 226 of SEQ ID NO: 2 and retaining the biological activity of gankyrin.

3. A polypeptide comprising an amino acid sequence from Met at position 1 to Gly at position 226 of SEQ ID NO: 2 and having the biological activity of gankyrin.

4. A polypeptide comprising an amino acid sequence modified by the deletion and/or addition of one or a plurality of amino acids and/or the substitution with other amino acids in the amino acid sequence from Met at position 1 to Gly at position 226 of SEQ ID NO: 2 and retaining the biological activity of gankyrin.

5. A polypeptide that is encoded by a DNA capable of hybridizing under a stringent condition to a DNA having the nucleotide sequence as set forth in SEQ ID NO: 1 and that has the biological properties of gankyrin.

6. A polypeptide comprising an amino acid sequence from Ala at position 14 to Met at position 231 of SEQ ID NO: 4 and having the biological activity of gankyrin.

7. A polypeptide comprising an amino acid sequence modified by the deletion and/or addition of one or a plurality of amino acids and/or the substitution with other amino acids in the amino acid sequence from Ala at position 14 to Met at position 231 of SEQ ID NO: 4 and retaining the biological activity of gankyrin.

8. A polypeptide comprising an amino acid sequence from Met at position 1 to Met at position 231 of SEQ ID NO: 4 and having the biological activity of gankyrin.

9. A polypeptide comprising an amino acid sequence modified by the deletion and/or addition of one or a

0950973.03100

plurality of amino acids and/or the substitution with other amino acids in the amino acid sequence from Met at position 1 to Met at position 231 of SEQ ID NO: 4 and retaining the biological activity of gankyrin.

5           10. A polypeptide that is encoded by a DNA capable of hybridizing under a stringent condition to a DNA having the nucleotide sequence as set forth in SEQ ID NO: 3 and that has the biological properties of gankyrin.

10           11. A polypeptide comprising an amino acid sequence from Ala at position 14 to Met at position 231 of SEQ ID NO: 6 and having the biological activity of gankyrin.

15           12. A polypeptide comprising an amino acid sequence modified by the deletion and/or addition of one or a plurality of amino acids and/or the substitution with other amino acids in the amino acid sequence from Ala at position 14 to Met at position 231 of SEQ ID NO: 6 and retaining the biological activity of gankyrin.

20           13. A polypeptide comprising an amino acid sequence from Met at position 1 to Met at position 231 of SEQ ID NO: 6 and having the biological activity of gankyrin.

25           14. A polypeptide comprising an amino acid sequence modified by the deletion and/or addition of one or a plurality of amino acids and/or the substitution with other amino acids in the amino acid sequence from Met at position 1 to Met at position 231 of SEQ ID NO: 6 and retaining the biological activity of gankyrin.

30           15. A polypeptide that is encoded by a DNA capable of hybridizing under a stringent condition to a DNA having the nucleotide sequence as set forth in SEQ ID NO: 5 and that has the biological properties of gankyrin.

a           16. A signal-added polypeptide in which a signal sequence has been added to a polypeptide according to claim 1, ~~2, 5, 6, 7, 10, 11, 12, or 15.~~

a           17. A fusion polypeptide comprising a polypeptide according to <sup>claim 1</sup>~~any of claims 1 to 16~~ and another peptide or polypeptide.

a           18. A DNA encoding a polypeptide according to <sup>claim 1</sup>~~any~~

~~of claims 1 to 17.~~

19. A vector comprising the DNA according to claim 18.

20. A host transformed with the vector according to claim 19.

21. A method of preparing a polypeptide according to ~~any of claims 1 to 17~~, said method comprising culturing a host transformed with an expression vector comprising a DNA encoding said polypeptide and recovering the desired polypeptide from said culture.

22. An antibody that specifically recognizes a polypeptide according to ~~any of claims 1 to 17~~.

23. An antibody according to claim 22 which is a monoclonal antibody.

24. An antibody according to claim 22 which is a polyclonal antibody.

25. A method of detecting or determining a gankyrin polypeptide, said method comprising contacting an antibody according to ~~any of claims 22 to 24~~ to a sample expected to contain said gankyrin polypeptide and detecting or determining the formation of an immune complex between said antibody and said gankyrin polypeptide.

26. An antisense oligonucleotide that hybridizes to any of the sites of the nucleotide sequence as set forth in SEQ ID NO: 1.

27. An antisense oligonucleotide corresponding to at least 20 contiguous nucleotides in the nucleotide sequence as set forth in SEQ ID NO: 1.

28. The antisense oligonucleotide according to claim 27 in which said at least 20 contiguous nucleotides preferably have a translation initiation codon.

29. A method of screening an agonist or an antagonist of the gankyrin polypeptide to the binding of the gankyrin polypeptide and Rb, said method comprising contacting the gankyrin polypeptide or a material containing the gankyrin polypeptide with a sample

09509775-033100

expected to contain the agonist or the antagonist of the gankyrin polypeptide in the presence of Rb, and detecting free gankyrin polypeptide or Rb.

5 30. The method according to claim 29 wherein said material containing the gankyrin polypeptide is a cell lysate that expresses the gankyrin polypeptide.

10 31. A method of screening an agonist or an antagonist of the gankyrin polypeptide to the binding of the gankyrin polypeptide and NFkB, said method comprising contacting the gankyrin polypeptide or a material containing the gankyrin polypeptide with a sample expected to contain the agonist or the antagonist of the gankyrin polypeptide in the presence of NFkB, and detecting free gankyrin polypeptide or NFkB.

15 32. The method according to claim 31 wherein said substance containing the gankyrin polypeptide is a cell lysate that expresses the gankyrin polypeptide.

20 33. An agonist of the gankyrin polypeptide obtainable by the screening method according to ~~any of claims 29 to 32.~~ *Claim 29*

34. An antagonist of the gankyrin polypeptide obtainable by the screening method according to ~~any of claims 29 to 32.~~ *Claim 29*

*Add  
(3)*

0950975-033100

*a a a*